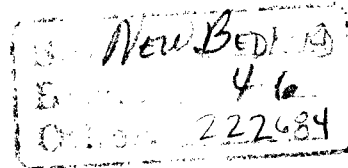




REPLY TO  
ATTENTION OF

DEPARTMENT OF THE ARMY  
OMAHA DISTRICT CORPS OF ENGINEERS  
6014 U.S. POST OFFICE AND COURTHOUSE  
OMAHA, NEBRASKA 68102

November 19, 1984



Environmental (SF) Office

Mr. Gerald Sotolongo  
Regional Site Manager  
U.S. EPA, Region I  
Hazardous Waste Management (Room 1907)  
J. F. Kennedy Federal Building  
Boston, Massachusetts 02203

Dear Mr. Sotolongo:

Enclosed are comments regarding the Feasibility Study Report performed for the upper harbor area of the New Bedford, Massachusetts Superfund Site. Comments of an editorial nature have been deleted. Many comments are related to specific design considerations and may not require definite answers at this time. However, they represent the type of concerns the Corps feels are important.

If you have questions regarding these comments, please contact Mr. William Bonneau, FTS 864-3077.

Sincerely,

*Robert F. Smart*  
for S. L. Carlock, P.E.  
Chief, Environmental (SF) Office  
Engineering Division

Enclosure

SDMS DocID 000222684



# DISPOSITION FORM

For use of this form, see AR 340-15; the proponent agency is TAGO.

REFERENCE OR OFFICE SYMBOL	SUBJECT
WESES-A	Review of Feasibility Study Report for New Bedford, MA, Superfund Site

Dr. Ray Montgomery, EED FROM C/APEG/ERSD/EL DATE 9 Nov 84 CMT 1  
M/EEBP 09

1. As requested, ERSD has reviewed the Feasibility Study and the addendum for the remedial action alternatives Acushnet River Estuary above Coggeshall Street Bridge, New Bedford site, Bristol County, MA, and offer the following general comments.

2. Report did not provide sufficient rationale justification and/or data to support the conclusion that all alternatives will provide equal containment of PCB's and heavy metals. In particular, the justification for the depth of the cap (3 feet) for the in-harbor sub-surface cell disposal alternative is without scientific support. However, recent work at WES indicates that a sand cap of three feet should isolate the contaminated sediments from the overlying water. Nevertheless, without supporting scientific data on the effectiveness of the particular sand cap from isolating the PCB's and heavy metal, this alternative will be open for attack and not easily defended.

3. Report indicates that port development may occur within the New Bedford Harbor system. If port development is considered for the Superfund Site, any in-harbor disposal alternative should address that particular issue.

HART

## FACSIMILE HEADER SHEET (ER 105-1-5)

FROM (Name)	OFFICE SYMBOL	TELEPHONE NO.	RELEASEER'S SIGNATURE		
C. CAIHOUGH	WESEP-D	542-3428			
TO (Name)	OFFICE SYMBOL	TELEPHONE NO.	# PAGES	PRECEDENCE	DTG
W. BONNEAU	M ROED-E	864-3077	2		

SUBJECT

FORM 4400  
1 FEB 73

# DISPOSITION FORM

For use of this form, see AR 340-15; the proponent agency is TAGO.

REFERENCE OR OFFICE SYMBOL	SUBJECT
ENEE	Review of Superfund Feasibility Study Reports for New Bedford, Massachusetts
WELDF 29	FROM SA/EED
	DATE 9 Nov 84
	CMT1
	MONTGOMERY/dg/3416

. The Environmental Engineering Division (EED) has completed its reviews of the subject documents. The authors did a good job considering that they were limited by the fasttrack approach taken for the feasibility study. The major strength of the study is the fact that the authors were able to identify realistic remedial action alternatives. However, the major weakness is the lack of physical and engineering data on the sediments to be removed. At this stage, the dredging and disposal alternatives presented are concepts. More detailed valuations and designs are needed to produce recommended plans of action. Nevertheless, the authors did an excellent job of collecting available data, consulting with experts on the problems, and conducting a feasibility study based on these sources of information.

. Specific comments on the report are as follows:

~~a. The organization and format of the documents make it difficult for the reader to find the authors' major findings. Most of the general information presented could be deleted.~~

b. A more detailed evaluation of the five remedial action alternatives is needed before the feasibility of each alternative can be adequately presented.

~~c. The conclusions and recommendations were not clearly stated in the documents.~~

d. The operational aspects of implementing the alternatives were not considered in sufficient detail. Operational requirements such as placing liners underwater and placing cap material in shallow water are examples of potential problems that could impact the feasibility and costs of alternatives.

e. The bucket wheel dredge recommended by the authors has not been evaluated for dredging highly contaminated sediments. Therefore, the basis for selecting this dredge is not clear. Also, a point was made in the report about the benefit of recirculation of water with the bucket wheel dredge. It was not clear how this recirculation (or reuse) of water would occur.

f. The shallow water in the project area and the low clearance at the Coggeshall Street Bridge limit the dredge equipment to small portable dredges. The considerations of conventional dredges such as hoppers and dustpans should be eliminated early in the study.

g. The 1,000,000 cubic yards of insitu contaminated sediments will not likely be contained in five (200,000 cubic yard pits) after being hydraulically dredged.

h. More consideration should have been given to placement techniques for cap material and dredged sediments.

i. The pit disposal concept is good but there are many design and operational problems that must be resolved before feasibility is established.

j. More detailed evaluations are needed to establish the need and nature of treatment alternatives. This includes effluent treatment at the proposed containment facilities and liners to control leachate.

*Montgomery*  
MONTGOMERY

New Bedford, Mass Feasibility Study Comments-Coggeshall Sheet Bridge Site

Page	Para	Comment
ES-14	3	The requirement for a liner system for reducing leakage of PCB's requires careful consideration. Since PCB's do not move easily through soil unless a co-solvent is present, the potential mass transport of PCB without a liner should be evaluated to verify the need, if any, for the liner. An engineering evaluation should also be a determining factor for the necessity for the liner, not regulatory and policy alone. Many "off the shelf" evaluations (models) are available to do this.
1-6	1-4	<del>The Corps should insure that sufficient funds are available during design to determine the characteristics and engineering properties of the deeper sediments.</del>
1-7	4	<del>Design of the liner should be based on the results of the investigation of the deeper sediments. The Corps should insure that sufficient funds are available during design to determine the characteristics and engineering properties of the deeper sediments.</del>
2-13	2	<del>Design of the liner should be based on the results of the investigation of the deeper sediments. The Corps should insure that sufficient funds are available during design to determine the characteristics and engineering properties of the deeper sediments.</del>
2-15	4	<del>Design of the liner should be based on the results of the investigation of the deeper sediments. The Corps should insure that sufficient funds are available during design to determine the characteristics and engineering properties of the deeper sediments.</del>
5-6	4	Please reference the pilot scale report on portable sediment dewatering. It should be provided to the Corps, if possible.
5-7	3	It is stated that the % solids achieved by settling will be considered "sufficient" for disposal. What is the % solids achievable and does it qualify as a "solid" in terms of EPA regulations?
6-15	2	Concerning dewatering the sediments for incineration, what % solids is estimated for this option? Would dewatering aids (ie: polymers, etc.) be required to achieve the minimum % solids?

Page	Para	Comment
7-9	7-3	<del>How was the 1 ppm "clean" level established for PCBs?</del> <del>What is the expected range for PCBs in the effluent?</del> <del>What is the expected range for PCBs in the effluent?</del>
7-16	1	Are the components of the proposed treatment plant a result of treatability studies or conjective? Since PCB is only very slightly soluble and is basically bound to the harbor sediments, a treatment process consisting of flocculation and settling might be acceptable depending upon the desired effluent quality criteria. What will the allowable effluent levels of PCB be?
8-6	1	How was the particle transport and resettling time determined in regard to oxidation of sulfides?
8-10, 8-11	4	Some discussion of the "irreconcilable constraints" concerning discharge to the sewer appears necessary. What % flow would it represent and what would the possible impacts be at receiving POTW? A treatability study may be needed to realistically assess the issue of constraints.
8-22	1	What % contaminants are estimated to remain due to "dredging inefficiency"?

DAEN-ECE-B

# DISPOSITION FORM

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REFERENCE OR OFFICE SYMBOL

WRSC-D

SUBJECT

Requested WRSC-D Comments on Draft EPA Superfund Project Report  
For Acushnet River Estuary

TO DAEN-ECE-B

FROM WRSC-D

DATE

24 OCT 1984 CMT 1  
MATHIS/ec/355-2235

1. ~~My major criticism with the report is that it provides no recommendations for~~  
~~the project. A logical, systematic framework is~~  
required to define the depth of sediment problem and what actual constraints (liner, cap,  
etc.,) are necessary for each identified disposal environment. The depth of contamination  
must be defined as a next step (not after an alternative is selected-page 1-6) to determine  
actual volumes, and, in turn, accurate cost estimates for each alternative. Sediment  
engineering properties should also be determined both spatially and with depth. It is  
possible, for example, that the deeper sediments might be suitable as a cap or liner by  
merely dredging these at the appropriate time during clean-up. Thus, a combination of  
identified alternatives might be possible, further reducing costs for clean-up. ~~the~~

2. I have enclosed a scope of work prepared by WES for the Indiana Harbor project, to be  
initiated this FY. This is being initiated as a demonstration project, primarily in  
response to the RCRA issue which we are pursuing with EPA. The general technical approach  
might be considered as a strawman for the Acushnet River project to systematically approach  
the problem and evaluate alternatives and required constraints. Please also note the  
subaqueous trenching/capping alternative which may also be feasible, at least in part, for  
the Acushnet River Project.

3. The dredging equipment section is very weak. For example, one reason given for using  
hydraulic (cutterhead) dredges is high solids production. The reverse is in fact true for  
conventional systems in that hydraulic equipment, although the most productive, offers the  
lowest solids to liquid ratio. This ratio can be increased dramatically with innovative  
dredge head designs or with other innovative types of equipment (airlift systems, etc).  
This equipment question is also being addressed in the Indiana Harbor project of  
enclosure 1.

4. The report conclusion that strict interpretation of Federal/State/local laws and  
regulations would prohibit any remedial action is factual and the same problem we  
potentially face in general with dredge material (RCRA issue). ~~the~~

5. ~~the~~

*David Mathis*

DAVID B. MATHIS  
Aquatic Biologist

1 Encl  
as